

Notes on Species of the Genus *Rondania* Robineau-Desvoidy, 1830 (Diptera, Tachinidae)

Agnieszka DRABER-MOŃKO

Museum and Institute of Zoology, Polish Academy of Sciences, Warsaw, Poland

Abstract. The descriptions and key for identification of pupae and third instar larvae of *Rondania dimidiata* (Meig.) and *R. fasciata* (Macq.), illustrated by scanning microphotographs are given.

Key words: Diptera, Tachinidae, *Rondania dimidiata*, *R. fasciata*, pupae, third instar larvae, descriptions, key

A beetle of the genus *Strophosoma* Billb. (Coleoptera, Curculionidae) is a new hitherto unknown host for *R. fasciata* (Macq.). To date, in the Palaearctic there have been recorded several species that belong to the genus *Rondania* R.-D. (Mesnil 1975, Richter 1979), and in Europe six species (Herting 1984), including two that were previously recorded only from Spain (Herting 1969). In Poland there have been recorded three species, namely *R. cucullata* R.-D., *R. dimidiata* (Meig.) and *R. fasciata* (Macq.) (Draber-Mońko 1991). The first two species are parasitoids of the family Curculionidae but the bionomics of the third species has not been explained so far (Herting 1960, Kolubajiv 1962, Mesnil 1975).

The present paper is based on the material collected in western and southwestern Poland and kept in the collection of the Museum and the Institute of Zoology PAS in Warsaw. These specimens were bred from beetles of the family Curculionidae by Dr Paweł Stachowiak from the Department of Forest Entomology of the Agricultural Academy in Poznań to whom I am greatly indebted for making the material available for my present paper. *R. dimidiata* (Meig.) was bred from a weevil *Brachyderes incanus* (L.) whereas *R. fasciata* (Macq.) from a weevil of the genus *Strophosoma* Billb.

Flies of the genus *Rondania* R.-D. are parasitoids of pests of forest crops. Knowledge of their preimaginal stages could be useful. For this reason, and to make it easier to distinguish dipters parasitizing in weevils, I hereby present a key for identifying the

Address for correspondence: Agnieszka Draber-Mońko, Museum and Institute of Zoology, Polish Academy of Sciences, 64 Wilcza str., P.O.Box 1007, 00-950 Warsaw, Poland

hitherto unknown developmental stages of the two species bred.

Key to third instar larvae and pupae

1. Posterior spiracles situated on bulbous swells (Figs 1, 3, 5, 7). Anal plate oval (Fig. 1) with a fusiform anal opening (Fig. 13). The upper surface of the posterior spiracles with numerous small semicircular calluses (Figs 1, 3, 5, 7) with respiratory apertures (Figs 9, 11). In the cephalopharyngeal skeleton of the third instar larva the distance between dorsal and ventral cornua pharyngeal sclerite in its proximal part nearly twice the width of the ventral cornu. Mouthhooks delicate (Figs 15 and 17).

..... *Rondania fasciata* (Macq.)

— Posterior spiracles situated on conical swells (Figs 2, 4, 6, 8). Anal plate fusiform (Fig. 2), with an oval stria in the middle and two bean-shaped folds on the sides of the elongated anal opening (Figs 2, 14). The upper surface of the posterior spiracle with three large semicircular excrescences with respiratory apertures situated there (Figs 8, 10, 12). In the cephalopharyngeal skeleton of the third instar larva the distance between the dorsal and ventral cornua pharyngeal sclerite in the proximal part almost the width of the ventral cornu. Mouthhooks massive (Figs 16 and 18).

..... *Rondania dimidiata* (Meig.)

third instar larva the distance between dorsal and ventral cornua pharyngeal sclerite in its proximal part nearly twice the width of the ventral cornu. Mouthhooks delicate (Figs 15 and 17). Atrium cylindrical (Fig. 15).

Rondania dimidiata (Meigen, 1824)

Figs 2, 4, 6, 8, 10, 12, 14, 16, 18

Material: Poland. The western edge of the Wielkopolska Lowland, Nowogród Bobrzański near Zielona Góra, 5–20. VII. 1981, 1♂, 1♀, ex *Brachyderes incanus* (L.), leg. et cult. P. Stachowiak. The northern edge of the Silesian Plain, Siemianice near Kępno, summer 1981, 1♂, ex *Brachyderes incanus* (L.), leg. et cult. P. Stachowiak; VII 1982, 1♂, 1♀, ex *Brachyderes Schönh.*, leg. et cult. P. Stachowiak.

Puparium 3–4 mm long. The colouration of the puparia varies from light to dark russet. Segmentation clearly marked. Posterior spiracles situated on conical swells (Figs 2, 4). Lateral walls of the conical swells with a distinct ribbing (Figs 6, 8) and with transverse striae (Figs 4, 6, 8). Respiratory apertures generally single (Figs 6, 8, 12), sometimes bifurcate (Fig. 10). Anal plate fusiform (Fig. 2), with an oval stria in the middle and two bean-shaped folds on the sides of the elongated anal opening (Figs 2, 14). In the cephalopharyngeal skeleton of the third instar larva the distance between the dorsal and ventral cornua pharyngeal sclerite in the proximal part almost the width of the ventral cornu (Figs 16 and 18). Mouthhooks massive (Fig. 18). Atrium flat (Fig. 16).

Rondania fasciata (Macquart, 1834)

Figs 1, 3, 5, 7, 11, 13, 15, 17

Material: Poland. The western edge of the Wielkopolska Lowlands, Nowogród Bobrzański near Zielona Góra, VII. 1982, 1♂, 5♀, ex *Strophosoma* sp., leg. et cult. P. Stachowiak. Northern edge of the Silesian Plain, Siemianice near Kępno, VII. 1982, 2♂, 1♀, ex *Strophosoma* sp., leg. et cult. P. Stachowiak.

Puparium 3–3.5 mm long. Light russet colouration. Segmentation indistinct. Posterior spiracles situated on bulbous swells (Figs 1, 3). Lateral walls of the bulbous swells with distinct calluses (Figs 5, 7). Anal plate oval (Fig. 1) with a fusiform anal opening (Fig. 13). The upper surface of the posterior spiracles with numerous small semicircular calluses, with irregular respiratory apertures (Figs 9 and 11). In the cephalopharyngeal skeleton of the

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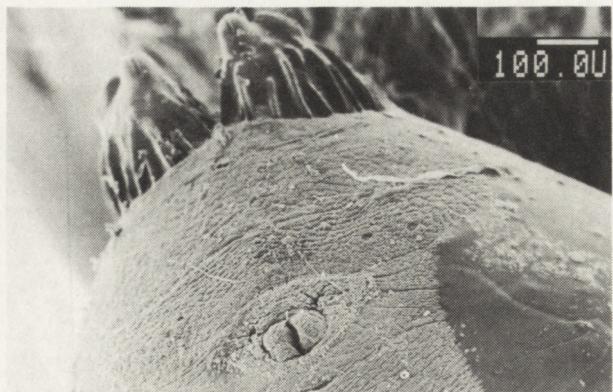
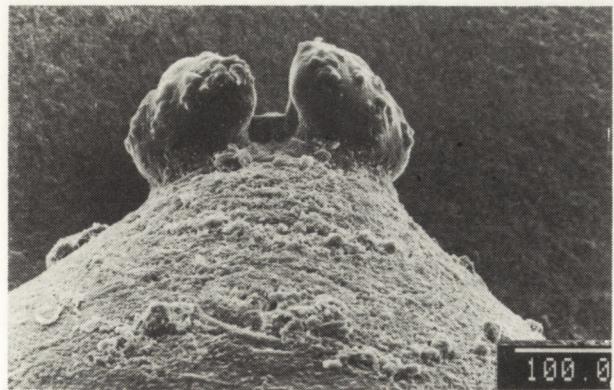
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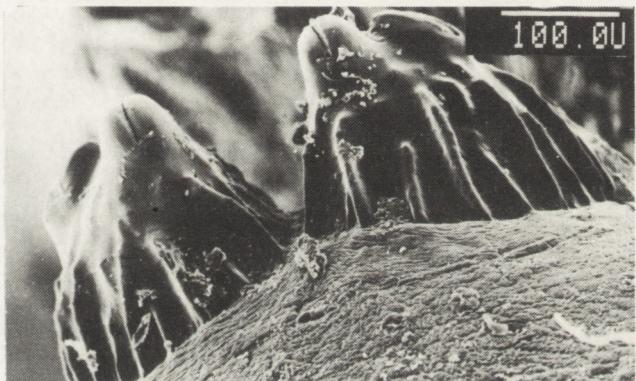
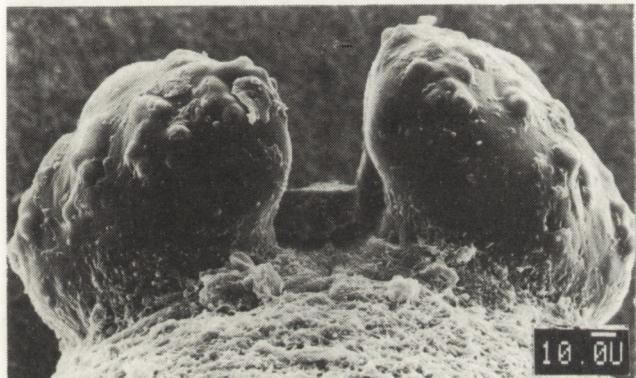
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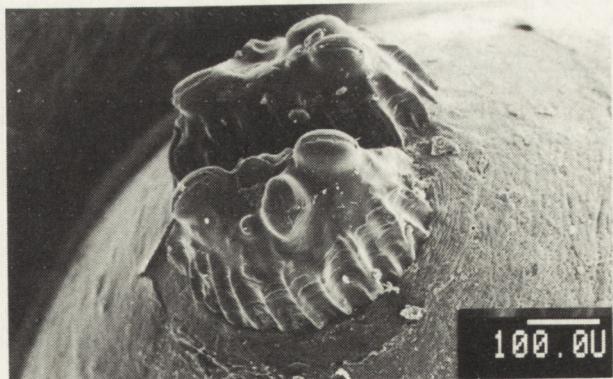
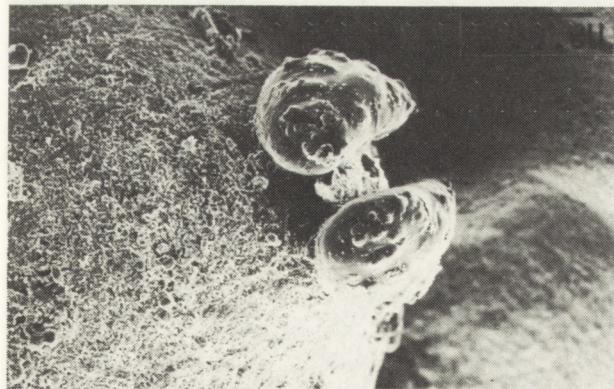
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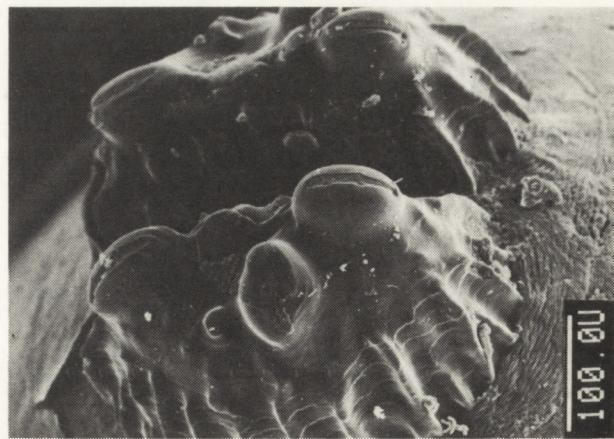
Figs 1–2. Puparia, posterior end, ventral view. 1 – *Rondania fasciata* (Macq.), 2 – *Rondania dimidiata* (Meig.).



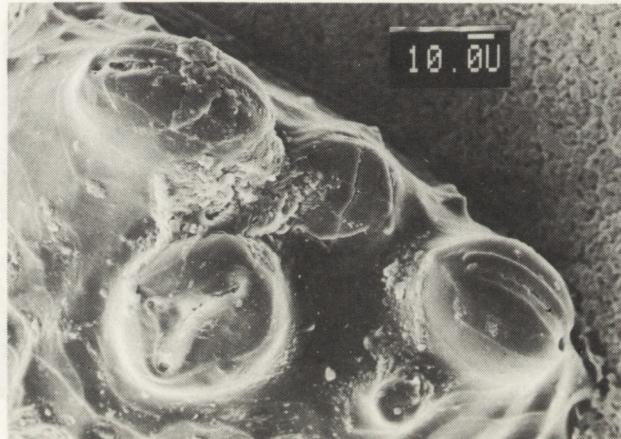
Figs 3–4. Posterior spiracles, ventral view. 3 – *R. fasciata* (Macq.), 4 – *R. dimidiata* (Meig.).



Figs 5–6. Posterior spiracles. 5 – *R. fasciata* (Macq.) ventral-posterior view, 6 – *R. dimidiata* (Meig.) lateral-posterior view.



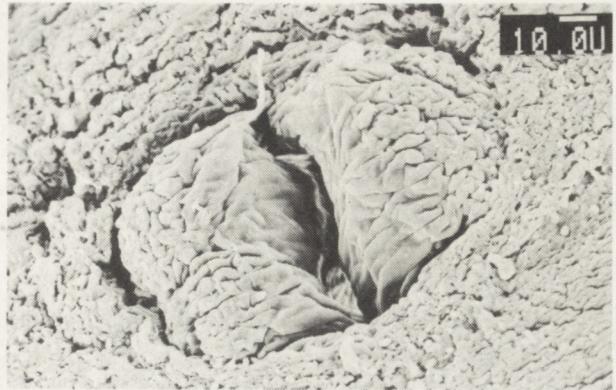
Figs 7–8. Posterior spiracles, posterior view. 7 – *R. fasciata* (Macq.), 8 – *R. dimidiata* (Meig.).



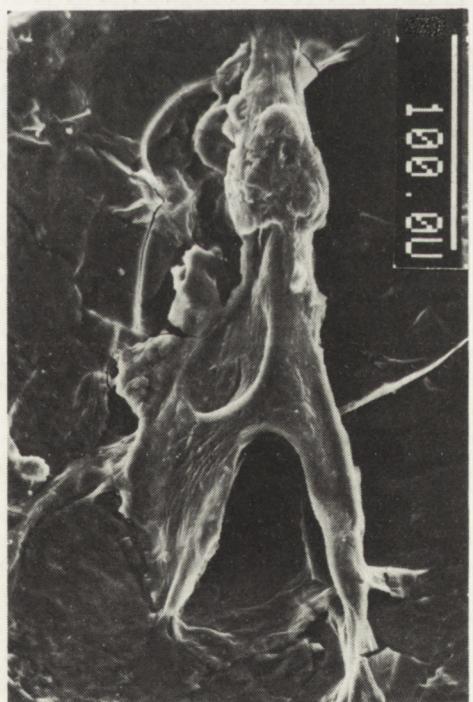
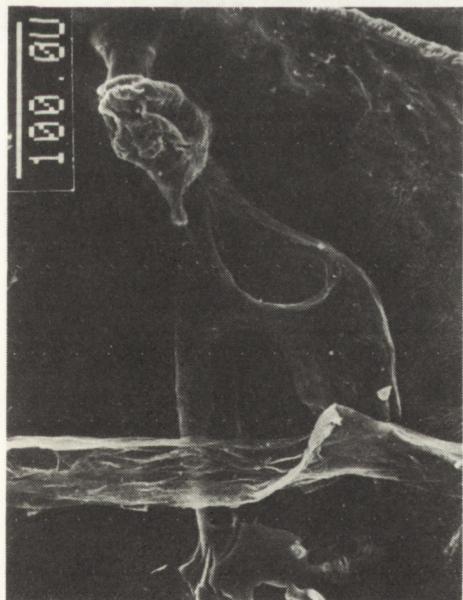
Figs 9–10. Posterior spiracular slits, posterior view. 9 – *R. fasciata* (Macq.), 10 – *R. dimidiata* (Meig.) with three spiracular slits, one of these bifurcate; there is button and perispiracular gland.



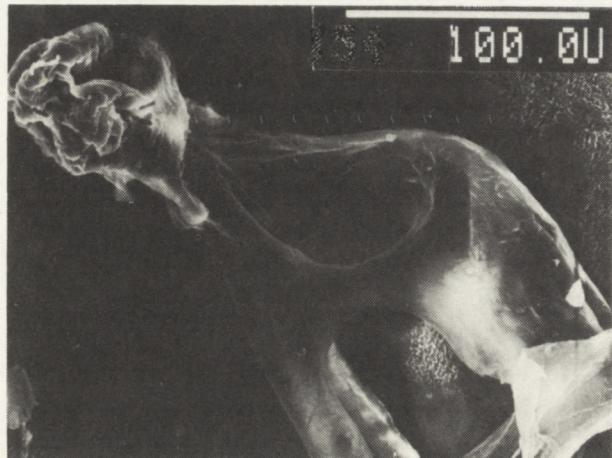
Figs 11–12. Posterior spiracular slits. 11 – *R. fasciata* (Macq.), 12 – *R. dimidiata* (Meig.).



Figs 13–14. Anal plates. 13 – *R. fasciata* (Macq.), anus spindle-shaped, 14 – *R. dimidiata* (Meig.), two bean-shaped folds on the sides of the elongated anal opening.



Figs 15–16. Anterior part of puparium with atrium and cephalopharyngeal skeleton, third instar larva. 15 – *R. fasciata* (Macq.), 16 – *R. dimidiata* (Meig.).



Figs 17-18. Cephalopharyngeal skeleton, third instar larva, lateral. 17 - *R. fasciata* (Macq.), 18 - *R. dimidiata* (Meig.).

All photographs by Dr K. Lembowicz